This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the claims:

Claim 1 (canceled)

Claim 2 (previously amended): A method of diagnosing hereditary non-polyposis colorectal cancer in a patient comprising:

(a) obtaining a DNA or RNA sample from a patient; and

(b) screening the DNA or RNA sample with an oligonucleotide probe to detect a hMLH1 mutant 1, a hMSH2 mutant 1, a hMSH2 mutant 2, or a hMSH2 mutant 3, wherein binding of the oligonucleotide probe to the DNA or RNA sample is indicative of the presence of the hMLH1 mutant 1, the hMSH2 mutant 1, the hMSH2 mutant 2, or the hMSH2 mutant 3 and hereditary non-polyposis colorectal cancer.

Claim 3 (previously amended): A method for predicting susceptibility of a patient to developing hereditary non-polyposis colorectal cancer comprising:

(a) obtaining a DNA or RNA sample from a patient; and

(b) screening the DNA or RNA sample with an oligonucleotide probe to detect a hMLH1 mutant 1, a hMSH2 mutant 1, a hMSH2 mutant 2, or a hMSH2 mutant 3, wherein binding of the oligonucleotide probe to the DNA or RNA

sample is indicative of the presence of the hMLH1 mutant 1, the hMSH2 mutant 1, the hMSH2 mutant 2, or the hMSH2 mutant 3 and hereditary non-polyposis colorectal cancer.

Claims 4-8 (canceled)

Claim 9 (previously amended): An oligonucleotide probe fully complementary to a sequence comprising a hMLH1 mutant 1, hMSH2 mutant 1, hMSH2 mutant 2, or hMSH2 mutant 3 in the DNA or RNA sample.

Claim 10 (new): The method of claim 2 wherein the oligonucleotide probe detects a hMLH1 mutant 1.

Claim 11 (new): The method of claim 2 wherein the oligonucleotide probe detects a hMSH2 mutant 1.

Claim 12 (new): The method of claim 2 wherein the oligonucleotide probe detects a hMSH2 mutant 2.

Claim 13 (new): The method of claim 2 wherein the oligonucleotide probe detects a hMSH2 mutant 3.

Claim 14 (new): The method of claim 3 wherein the oligonucleotide probe detects a hMLH1 mutant 1.

Claim 15 (new): The method of claim 3 wherein the oligonucleotide probe detects a hMSH2 mutant 1.

Claim 16 (new): The method of claim 3 wherein the oligonucleotide probe detects a hMSH2 mutant 2.

Claim 17 (new): The method of claim 3 wherein the oligonucleotide probe detects a hMSH2 mutant 3.

Claim 18 (new): The oligonucleotide probe of claim 9 wherein the oligonucleotide probe is fully complementary to a sequence comprising a hMLH1 mutant 1.

Claim 19 (new): The oligonucleotide probe of claim 9 wherein the oligonucleotide probe is fully complementary to a sequence comprising a hMSH2 mutant 1.

Claim 20 (new): The oligonucleotide probe of claim 9 wherein the oligonucleotide probe is fully complementary to a sequence comprising a hMSH2 mutant 2.

Claim 21 (new): The oligonucleotide probe of claim 9 wherein the oligonucleotide probe is fully complementary to a sequence comprising a hMSH2 mutant 3.